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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,207	06/19/2003	Darko Segota	11023.3	9028

7590 05/19/2006

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EXAMINER

ELDRED, JOHN W

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/600,207	SEGOTA ET AL	
	<b>Examiner</b>	<b>Art Unit</b>	
	J. Woodrow Eldred	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 4-27-06 requesting an RCE.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 12-14, 16, 17, 19-22, 24-26, 29-34, 37-39, 43-45, 47-49, and 52-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al (5,505,409).

Wells et al disclose a fluid flow regulator on the surface of an object comprising a plurality of steps that create low pressure areas and thus effect the fluid flow and drag upon the object. Wells et al disclose the regulators being used upon a variety of object, and specifically mention the broad category of airfoils and wings for aircraft. See especially column 2, lines 18-19; column 3, lines 11-45; and column 4, lines 3-41 of Wells et al. To employ the fluid flow regulators of Wells et al on a particular airfoil of an aircraft, such as the claimed stabilizer or rudder, is considered to have been obvious to one having ordinary skill in the art, since this is merely applying the disclosed regulators to a particular type of airfoil or wing within the broadly disclosed category of intended use by Wells et al. Also, the limitation of having the “pressure recovery drop located proximate an optimal pressure recovery point” is considered to have been obvious to one having ordinary skill in the art. Applicant defines this “point” as being the curvilinear line along the surface where adverse pressure creates unwanted drag. Wells et al specifically discloses that the flow regulators are to reduce unwanted drag, so it is considered to be normal engineering practice to place a regulators (which are placed at a number of locations) at a position which would be “optimal” to reduce drag in order to increase performance by a maximum amount. Note that without further structural distinctions, the disclosed fluid flow regulator is considered to read over the diffuser vane”.

Art Unit: 3641

3. Claims 1-14, 16-22, 24-43, 45, 47-53, and 56-58 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Falco (5,133,519).

See especially column 3, lines 11-60, and Figures 1 and 4.

4. Claims 1-14, 16, 17, 19-22, 24-43, 45, and 47-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falco (5,133,519).

Falco discloses a fluid flow regulator on the surface of an object comprising a plurality of steps that create low pressure areas and thus effect the fluid flow and drag upon the object. Falco discloses the regulators being used upon a variety of object, and specifically mention the broad category of airfoils and wings for aircraft. See especially column 7, lines 17-19; column 3, lines 11-60; and Figures 1 and 4 of Falco. To employ the fluid flow regulators of Falco on a particular airfoil of an aircraft, such as the claimed stabilizer or rudder, is considered to have been obvious to one having ordinary skill in the art, since this is merely applying the disclosed regulators to a particular type of airfoil or wing within the broadly disclosed category of intended use by Falco. Also, the limitation of having the "pressure recovery drop located proximate an optimal pressure recovery point" is considered to have been obvious to one having ordinary skill in the art.

Applicant defines this "point" as being the curvilinear line along the surface where adverse pressure creates unwanted drag. Falco specifically discloses that the flow regulators are to reduce unwanted drag, so it is considered to be normal engineering practice to place a regulators (which are placed at a number of locations) at a position which would be "optimal" to reduce drag in order to increase performance by a maximum amount.

5. Claims 15, 23, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al in view of Occhipinti (5,540,406).

Wells et al is applied as above except that it fails to disclose that the flow regulators are removably attachable. Occhipinti teach that it is well known to use a removably attachable flow regulator on an airfoil. See especially Figures 6 and 8. Motivation to combine is the improved performance gained by being able to attach the flow regulator to

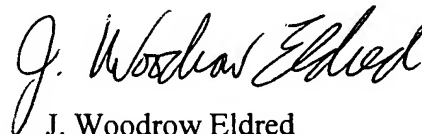
Art Unit: 3641

existing airfoils, and to remove it if desired to save weight in exchange for performance. To employ the teachings of Occhipinti on the flow regulators of Wells et al and have a removably attachable flow regulator is considered to have been obvious to one having ordinary skill in the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Woodrow Eldred whose telephone number is 571-272-6901. The examiner can normally be reached on Monday to Thursday, from 8:00 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Woodrow Eldred  
Primary Examiner  
Art Unit 3641

JWE